New Names in California Oaks

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ABSTRACT. The following five names are proposed for California oaks: *Quercus john-tuckeri*, nom. et stat. nov. for *Quercus turbinella* subsp. *californica* J. M. Tucker; *Quercus pacifica*, sp. nov.; *Quercus* ×*kinselae*, stat. nov. for *Quercus dumosa* Nuttall var. *kinselae* C. H. Muller; *Quercus durata* var. *gabrielensis* Nixon & C. H. Muller, var. nov.; and *Quercus parvula* var. *shrevei* (C. H. Muller) Nixon, stat. nov. for *Quercus shrevei* C. H. Muller.

In the course of preparing a treatment of the genus *Quercus* in California, we have found it necessary to provide new names for the following five taxa. We are publishing these names in advance of the full study, in order to make them available for floristic treatments currently in preparation.

1. Quercus john-tuckeri Nixon & C. H. Muller, nom. et stat. nov. Basionym: *Quercus turbinella* E. Greene subsp. *californica* J. M. Tucker, Madroño 11: 240. 1952. TYPE: U.S.A. California: San Luis Obispo County, ca. 2 mi. NE of summit of Caliente Mountain, 2 Oct. 1948, *J. Tucker 1886-16* (holotype, UC 938396; isotypes, DAV, BH).

Shrubs 1–3(–5) m tall, subevergreen or evergreen; bark scaly; twigs yellowish or dingy gray, 1–1.5(–2) mm thick, densely tomentulose; buds brown, ovoid or globose, 1.5–2(–3) mm long, glabrous except for the ciliate margins of the scales, lowermost scales often yellowish puberulent. *Petiole* 1–4 mm. *Leaf blade* unicolored, elliptic or obovate, thick and coriaceous, often brittle, (10–)15–30(–40) mm × (8–)10–15(–20) mm; base squarrose or rounded-attenuate, rarely subcordate; secondary veins (3–)4–7, often some of the veins branching near margin and passing into more than one tooth; margin irregularly spinose-toothed, occasionally shallowly lobate; apex acute or rounded; abaxially waxy grayish or light green, with sparse to moderately dense vestiture of (8–)10–12-rayed (loosely) appressed stellate hairs, these often 0.2–0.5 mm diam., and sparse to dense yellowish glandular hairs; adaxially grayish, stellate similar to abaxial surface. *Fruits* solitary or paired, subsessile; cup cup-shaped or obconic to hemispheric, thin, 10–15 mm wide × 5–7 mm deep; scales whitish or yellowish, moderately or scarcely tuberculate, puberulent. *Nut* fusiform, ovoid or conic, apically acute, 20–30 mm long. *Cotyledons* free.

Dry slopes, chaparral, piñon and juniper woodland, margins of oak woodland and sagebrush; 900–2,000 m.

Endemic to California, from Los Angeles County north in the interior Coast Ranges and Sierra Foothills to the northern edge of the Sacramento Valley.

Quercus john-tuckeri bears some resemblance to both *Q. turbinella* and *Q. berberidifolia* Liebmann; however, the former has pedunculate fruit and typically cordate leaf bases, while the latter has a glabrate upper leaf surface, substantially smaller stellate trichomes with fewer rays on the lower leaf surface, heavier, tuberculate acorn cups, and typically nonacute acorns.

At the species level, the epithet *californica* is preoccupied by the illegitimate (but validly published) name *Quercus californica* Torrey ex J. G. Cooper (= *Q. kellogii* Newberry).

2. Quercus pacifica Nixon & C. H. Muller, sp. nov. TYPE: U.S.A. California: Santa Barbara County, rocky slope E of Pelican Bay, Santa Cruz Island, alt. 100 ft., *Ira W. Clokey 4893* (holotype, BH-CHM).

Frutices ad 2 m vel raro arbores ad 5 m, subsempervirentes. Petioli 2–5 mm longi. Lamina foliorum obovata vel oblonga, 15–40 mm longa, 7–20(–40) mm lata, margine integra vel dentata; pagina abaxialis ceracea, glandifera, sparsim stellato-pilosa, pilis paginae abaxialis adpressis; pagina adaxialis viridis, glabra. Nux sessilis, cylindrica vel fusiformis, (15–)20–30 mm longa, (6–)9–15 mm lata, apex acutus.

Shrubs to 2 m tall, rarely small trees to 5 m or taller, subevergreen; bark scaly on older branches and trunk; twigs brownish or reddish and minutely

puberulent, becoming glabrate and gray with age; buds ovate or globose, 2–3 mm long by 1–2 mm thick, light or chestnut brown. *Petiole* 2–5 mm. *Leaf blade* planar to moderately convex or undulate, obovate or oblong, 15–40 mm long by 7–20(–40) mm wide; base cuneate or rounded but attenuate-decurrent along the petiole, leaf tip blunt and rounded, occasionally subacute with a mucronate tip, leaf margin minutely cartilaginous, entire or with 1–5 irregular teeth on each side; secondary veins obscure, 1–5 on each side; abaxially with minute, flat appressed-stellate hairs scattered on the waxy and glandular surface and not obscuring it. *Cup* usually subsessile, paired or solitary in leaf axils, hemispheric to turbinate, enclosing only the base of the nut, to 35 mm wide by 15 mm deep, scales moderately to heavily tuberculate and irregularly formed. *Nuts* acute-cylindric or fusiform, (15–)20–30 mm long by (6–)9–15 mm thick, light brown, glabrate. *Cotyledons* free.

Chaparral, oak woodland, margins of grassland, understory in closed-cone pine stands; 0–300 m.

Quercus pacifica is endemic on three of the California Channel Islands: Santa Cruz, Santa Catalina, and Santa Rosa. It is not known from the mainland but bears a superficial similarity to some of the tree forms that are putative hybrids between *Q. engelmannii* E. Greene and *Q. cornelius-mulleri* Nixon & K. P. Steele in San Diego County. The latter populations, which have been described as *Q.* ×*acutidens* Torrey [pro sp.], differ in having much greater variability in leaf shape, thicker, more coriaceous leaves, denser abaxial leaf vestiture, much smaller hairs typically having more than 10 rays, and variable levels of connation of cotyledons, which are always free in *Q. pacifica*. *Quercus pacifica* appears to be most closely related to *Q. douglasii*, whether by direct descent or by introgression with another species no longer extant on the islands.

3. Quercus ×kinselae (C. H. Muller) Nixon & C. H. Muller, stat. nov. (*Quercus dumosa* Nuttall × *Quercus lobata* Nee). Basionym: *Quercus dumosa* Nuttall var. *kinselae* C. H. Muller, Madroño 5: 157. 1940. TYPE: U.S.A. California: Santa Barbara County, Rattlesnake Canyon Road on Skofield Ranch, alt. 1,000 ft., 30 Oct. 1938, *K. Kinsel 50* (holotype, NA; isotype, CHM-BH).

The name *Quercus townei* E. J. Palmer was described as a hybrid between *Quercus dumosa* and *Quercus lobata*, but its type is intermediate between *Q. durata* var. *gabrielensis* and *Q. lobata*, collected in the vicinity of Pasadena.

4. Quercus durata Jepson var. **gabrielensis** Nixon & C. H. Muller, var. nov. TYPE: U.S.A. California: Los Angeles County, San Gabriel, canyon on N side of hill, Feb. 1861, *W. H. Brewer 165* (holotype, US).

Frutices sparsim ramosae, inordinatae. Lamina foliorum aliquantum cotyliformis, vel interdum planiuscula, pagina adaxialis viridis, nitida, plerumque glabra vel sparsim stellato-pilosa; pili paginae adaxialis plerumque 2–4 mm longi, radii arcuati, curvati vel recti, non crispati.

Shrubs, openly branched, scraggly. *Leaf blade* moderately cupped, sometimes almost planar. *Adaxial leaf surface* green, glossy, usually glabrate or with sparse stellate pubescence; abaxial leaf hairs usually 2–4 mm long, rays arched, curved or straight, not curly.

Chaparral on dry, exposed loose slopes on non-serpentine soils; 450–1,000 m.

This variety occurs only in Los Angeles County, California, on the south slope of the San Gabriel Mountains from La Cañada to Pomona. In this area along the lower elevational limits of *Q. durata* var. *gabrielensis*, occasional intermediates with *Q. engelmannii* occur (*Quercus* ×*grandidentata* Ewan [pro sp.]). These putative hybrids are large shrubs or small trees with leaves that are persistently woolly on the abaxial surface and have coarse, regular teeth. Most of these hybrids have been eliminated by the same uncontrolled urban growth that has largely exterminated *Q. engelmannii* in this area.

5. Quercus parvula E. Greene var. **shrevei** (C. H. Muller) Nixon, stat. nov. Basionym: *Quercus shrevei* C. H. Muller, Amer. Midl. Naturalist 19: 587. 1938. TYPE: U.S.A. California: Monterey County, ridgetop in Palo Colorado Canyon, ca. 4 mi. from the ocean, *Shreve 104* (holotype, originally at Desert Laboratory, Tucson, now at ARIZ; isotype CHM-BH).

Small to large trees, sometimes shrubby in exposed sites, to 20 m tall; bark gray, smooth to lightly furrowed; twigs greenish or brown, 2–3 mm thick, glabrous to sparsely pubescent; buds dark brown, 4–12 mm long, silky pubescent, the scales acute. *Petiole* 2–25 mm long, sparsely pubescent on adaxial surface. *Leaf blade* oblong to lanceolate, (25–)35–75(–105) × 20–35 mm, leathery, base rounded or subcordate; margin usually entire, rarely spinose; apex acute or subacute. *Staminate catkins* yellowish or reddish, 20–80 mm long, glabrate, stamens 4–5(–7). *Styles* 3–4. *Fruits* 1–3, subsessile or on stout peduncles to 3–5 mm; cup deeply cup-shaped, 20–25 mm deep, 15–25 mm wide, the rim

often invaginated, scales acute, silky-pubescent. *Nut* light brown, often puberulent, cylindric, globose or somewhat tapered, apically rounded, 20–45 × 15–20 mm. *Cotyledons* free.

Mixed evergreen forest and redwood forest; 0–1,000 m; flowering April–May.

Outer Coast Ranges of central California, from San Luis Obispo County north to Marin County.

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